IV. "On the Arrangement of the Muscular Fibres of the Ventricular Portion of the Vertebrate Heart; with Physiological Remarks." By JAMES PETTIGREW, M.D. Communicated by Professor GOODSIR. Received March 26, 1863.

This paper is a revised version of a previous one, having the same title, which was communicated to the Society on the 22nd of November, 1859, and formed the substance of the Croonian Lecture delivered by the author on the 19th of April, 1860.

The author has now included the results of his researches on the structure of the ventricular portion of the heart in fishes, reptiles, and birds.

April 30, 1863.

Major-General SABINE, President, in the Chair.

Pursuant to notice given at the last Meeting, Professor Heinrich Gustav Magnus, of Berlin, was balloted for, and elected a Foreign Member of the Society.

The following communications were read:—

I. "On Spectrum Analysis; with a Description of a large Spectroscope having nine Prisms, and Achromatic Telescopes of two-feet focal power." By JOHN P. GASSIOT, F.R.S. Received April 21, 1863.

(Abstract.)

The author, after briefly alluding to the discoveries of Fox Talbot, Wheatstone, Foucault, Kirchhoff, and Bunsen, and the importance of spectrum analysis, states that among the numerous spectroscopes which were exhibited in the International Exhibition of 1862, there was one which had been specially constructed by Messrs. Spencer, Browning, and Co., philosophical instrument makers in London, which at the time excited considerable attention. This spectroscope had two prisms, with a magnifying power of 40, its definition being remarkably clear.